

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00004C6
Revision No:
5

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the A & B Class divisions fire integrity: A class divisions.

with type designation(s)
Class A-60 steel deck

Issued to

SAINT-GOBAIN ISOVER G+H AG
Ludwigshafen am Rhein, Rheinland-Pfalz, Germany

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2023/1667,

item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434,1435; IMO MSC.1/Circ.1616, 1621

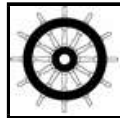
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-11-21**.

Issued at **Hamburg** on **2023-11-22**

DNV local unit:
Augsburg

Approval Engineer:
Marcin Tobiasz



Notified Body
No.: **0098**



for **DNV GL SE**

Digitally Signed By:
Christine Mydlak-Röder
Location: DNV GL SE,
Hamburg, Germany

Christine Mydlak-Roeder
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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Product description

"Class A-60 steel deck"

Steel decks with different insulation constructions as listed in enclosed Appendix.

Application/Limitation

Approved for use as horizontal fire retarding division of class A-60.

For further details regarding Applications/Limitations see Appendix.

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

Each product is to be supplied with its manual for installation and maintenance.

Type Examination documentation

Test report No. 4P04380-1 dated 12 August 2014 from SP Technical Research Institute of Sweden, Borås, Sweden.

Test reports No. PGA10521 dated 24 September 2014 from DBI, Hvidovre, Denmark.

Test reports No. PGA11099A dated 6 December 2017 from DBI, Hvidovre, Denmark.

Test reports No. PGA11132A dated 2 February 2018 from DBI, Hvidovre, Denmark.

Test reports No. PGA11268A dated 30 August 2018 from DBI, Hvidovre, Denmark.

Test reports No. PGB10230A dated 5 December 2022 from DBI, Hvidovre, Denmark.

Statement regarding Test Report No. PGB10230A dated 31 May 2023 from DBI, Hvidovre, Denmark.

Assessment report No. PHA10498a Rev.2 (use of mats or rolls instead of slabs) dated 15 January 2020 from DBI.

Assessment report No. PHA10498b (alternative insulation on stiffeners) dated 09 December 2019 from DBI.

Assessment report No. PHA10498c (minimum thickness and density) dated 16 December 2019 from DBI.

Assessment report No. PHA10498d (position of joints) dated 27 March 2020 from DBI.

Assessment report No. PHA10498e Rev.3 (mounting methods for insulation on stiffeners) dated 3 January 2022 from DBI.

Assessment report No. PHA10498f (washer's diameters 38mm) dated 16 December of 2019 from DBI.

Assessment report No. PHA10498g (pin pattern) dated 15 January 2020 from DBI.

Assessment report PHA11121A dated 8 October 2018 from DBI. With assessment no. PHA11121A the validity of technical assessments nos. PHA10498c, PHA10498d, PHA10498e, PHA10498f and PHA10498g is prolonged and extended to cover test reports nos. PGA11099A and PGA11268A.

Assessment report No. PHA10976A (longitudinal joints placed arbitrarily with respect to the pins) dated 28 November 2017 from DBI.

Drawing no. AK2307 (4 pages) dated 11 December 2014 from Saint-Gobain Isover G+H AG.

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG Approval Number if applicable (see first page).

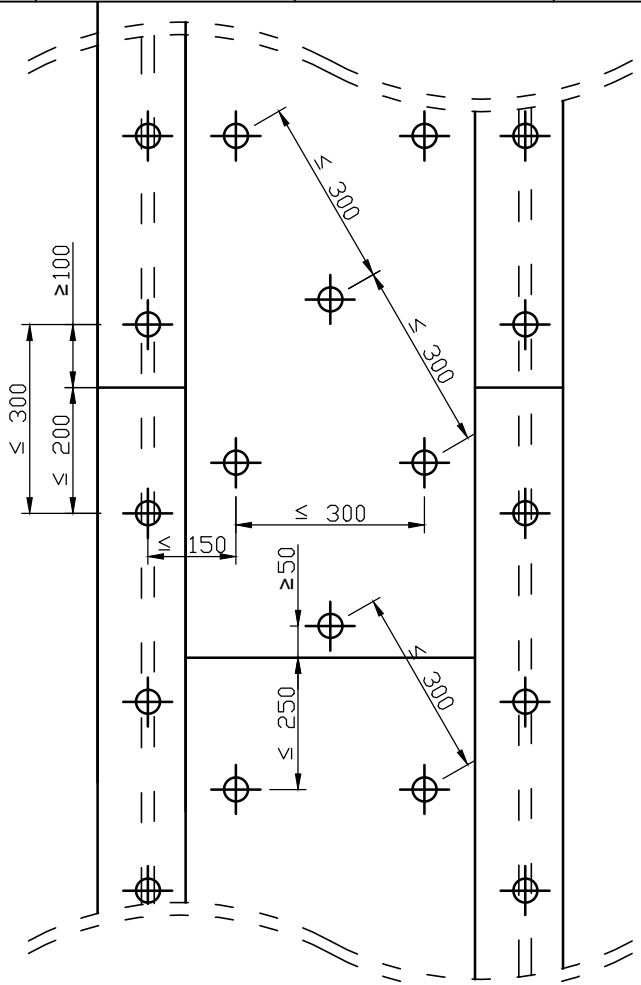
Appendix A to MEDB00004C6
Alternative constructions:

	Product Description	Type Approval Documentation
1	<p>"U Sea Protect 36/70 + 76/20"</p> <p>Composed of a stiffened steel deck insulated underneath with min. 70 mm thick mineral wool of type U SeaProtect 36. The distance from the joints to the pins on the surface insulation is approx. 150 mm on both sides of the joint. All the insulation slabs are mounted tightly together along the joints.</p> <p>Min. 20 mm mineral wool of type U SeaProtect 76 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 76.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA11268A</p> <p>Assessment report nos. PHA10498a, Rev.2 (use of mats or rolls instead of slabs) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e, Rev.3 (mounting methods for insulation on stiffeners) PHA10498f (washer's diameters 30mm) PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>
2	<p>"U SeaProtect 50/60 + 76/20"</p> <p>Composed of a stiffened steel deck insulated underneath with min. 60 mm thick mineral wool of type U SeaProtect 50.</p> <p>Min. 20 mm mineral wool of type U SeaProtect 76 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 76.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGB10230A</p> <p>Assessment report nos. PHA10498a, Rev.2 (use of mats or rolls instead of slabs) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e, Rev.3 (mounting methods for insulation on stiffeners) PHA10498f (washer's diameters 30mm) PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>
3	<p>"U SeaProtect 36/70 + 36/70"</p> <p>Composed of a stiffened steel deck insulated underneath with min. 70 mm thick mineral wool of type U SeaProtect 36.</p> <p>Min. 70 mm mineral wool of type U SeaProtect 36 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 36.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. 4P04380-1</p> <p>Assessment report nos. PHA10498a, Rev.2 (use of mats or rolls instead of slabs) PHA10498b (alternative insulation on stiffeners) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e, Rev.3 (mounting methods for insulation on stiffeners) PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>
4	<p>"U SeaProtect 36/70 + 76/25"</p> <p>Composed of a stiffened steel deck insulated underneath with min. 70 mm thick mineral wool of type U SeaProtect 36.</p> <p>Min. 25 mm thick mineral wool of type U SeaProtect 76 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 76.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. 4P04380-1</p> <p>Assessment report nos. PHA10498a, Rev.2 (use of mats or rolls instead of slabs) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e, Rev.3 (mounting methods for insulation on stiffeners) PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>

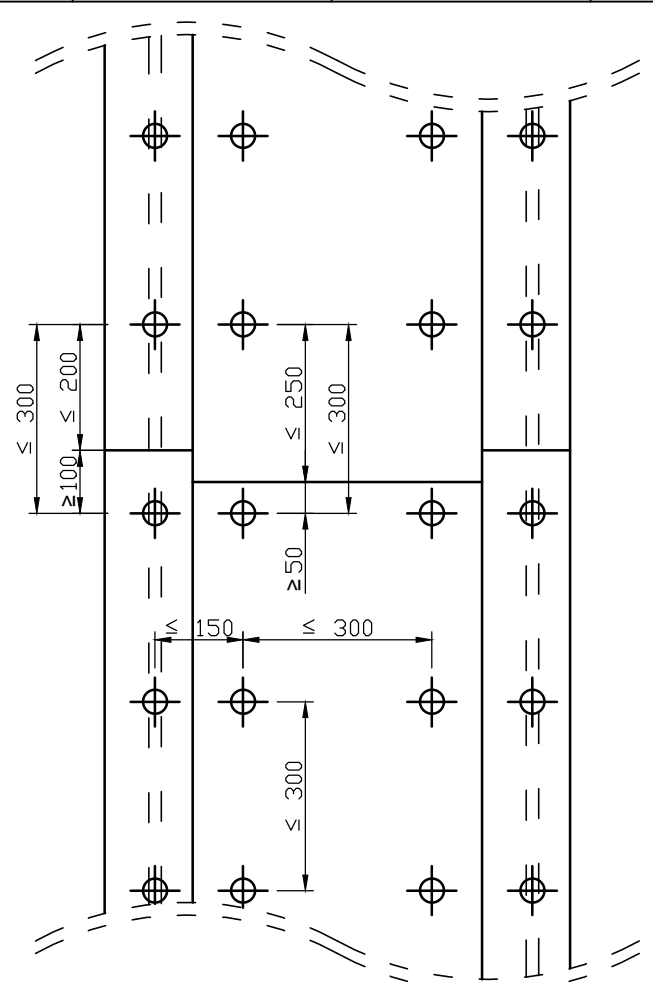
5	<p>“U SeaProtect 66/50 + 76/25”</p> <p>Composed of a stiffened steel deck insulated underneath with min. 50 mm thick mineral wool of type U SeaProtect 66.</p> <p>Min. 25 mm thick mineral wool of type U SeaProtect 76 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 76.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA10521</p> <p>Assessment report nos. PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e, Rev.3 (mounting methods for insulation on stiffeners) PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>
6	<p>“U SeaProtect Wired Mat 66/40”</p> <p>Composed of a stiffened steel deck insulated underneath with min. 40 mm thick mineral wool of type U SeaProtect Wired Mat 66. The insulation is mounted across the steel plate and rectangular to the stiffeners. The insulation is wrapped around the stiffeners as the mats are mounted.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA11099A</p> <p>Assessment report nos. PHA11121A (with reference to further assessments as stated below): PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e, Rev.3 (mounting methods for insulation on stiffeners) PHA10498f (washer’s diameters 30mm) 7PHA10498g (pin pattern) P8HA10976A (longitudinal joints placed arbitrarily with respect to the pins)</p> <p>Drawing no. AK2307</p>
7	<p>“Ultimate U SeaProtect Slab 56/50 + 76/20”</p> <p>Composed of a stiffened steel deck insulated underneath with min. 50 mm thick mineral wool type U SeaProtect 56. The distance from the joints to the pins on the surface insulation is approx. 150 mm on both sides of the joint. All the insulation slabs are mounted tightly together along the joints.</p> <p>Min. 20 mm mineral wool of type U SeaProtect 76 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 76.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA11132A</p> <p>Assessment report nos. PHA10498a, Rev.2 (use of mats or rolls instead of slabs)</p> <p>Drawing no. AK2307</p>
8	<p>“Ultimate U SeaProtect Slab 56/50 + 56/30”</p> <p>Composed of a stiffened steel deck insulated underneath with min. 50 mm thick mineral wool type U SeaProtect 56. The distance from the joints to the pins on the surface insulation is approx. 150 mm on both sides of the joint. All the insulation slabs are mounted tightly together along the joints.</p> <p>Min. 30 mm mineral wool of type U SeaProtect 56 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 56.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA11132A</p> <p>Assessment report nos. PHA10498a, Rev.2 (use of mats or rolls instead of slabs) PHA10498b (alternative insulation on stiffeners)</p> <p>Drawing no. AK2307</p>

9	<p>“U SeaProtect 36/70 + 56/30”</p> <p>Composed of a stiffened steel deck insulated underneath with min. 70 mm thick mineral wool of type U SeaProtect 36.</p> <p>Min. 30 mm mineral wool of type U SeaProtect 56 is fitted around the stiffeners. The void of the stiffeners is filled with mineral wool of type U SeaProtect 56.</p> <p>The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA11268A</p> <p>Assessment report nos. PHA10498a, Rev.2 (use of mats or rolls instead of slabs) PHA10498b (alternative insulation on stiffeners) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e, Rev.3 (mounting methods for insulation on stiffeners) PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>
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- 1 All mineral wool of type U SeaProtect are produced by Saint-Gobain ISOVER G+H AG.
- 2 Naming: U SeaProtect Density/Thickness. E.G. U SeaProtect 36/70 is a mineral wool with nominal density of 36 kg/m³ and a thickness of 70 mm.



layout type A



layout type B

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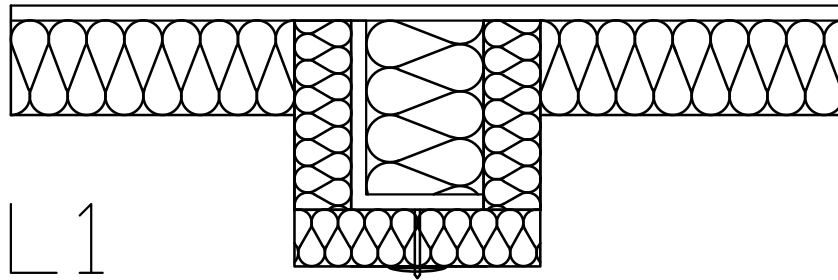
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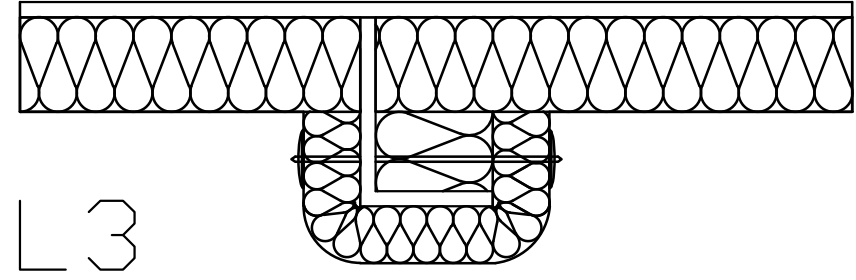
SAINT-GOBAIN ISOVER

Steel Deck Class A-15, A-30 and A-60
 General or restricted Application
 Drawing for EC-type examination (Modul B) Certificate

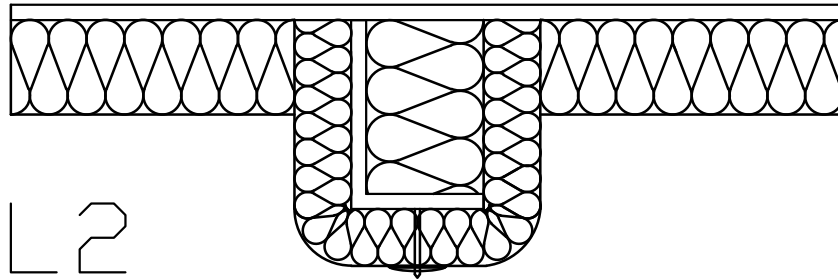
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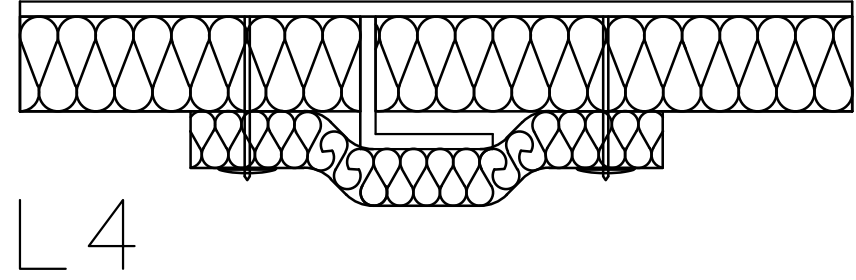
L1



L3



L2



L4

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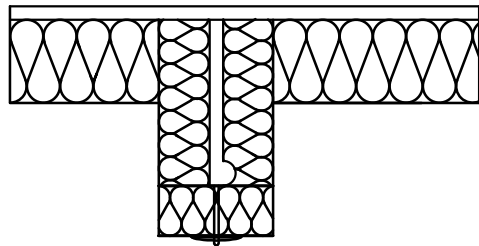
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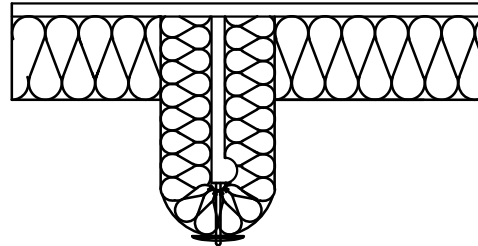
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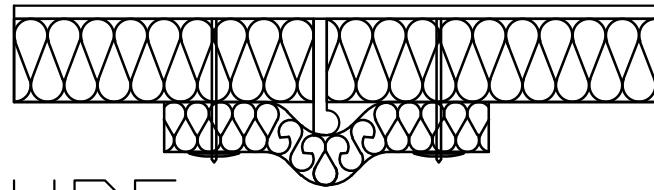
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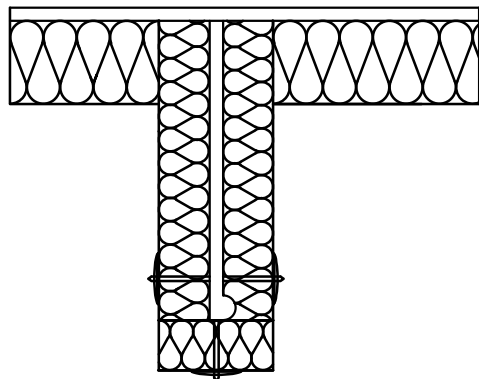
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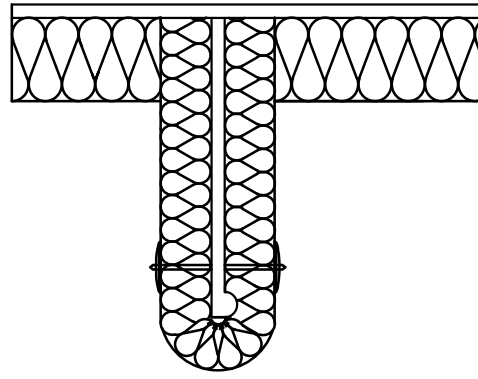
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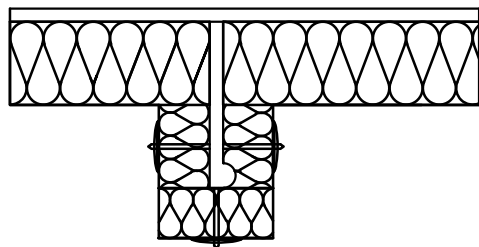
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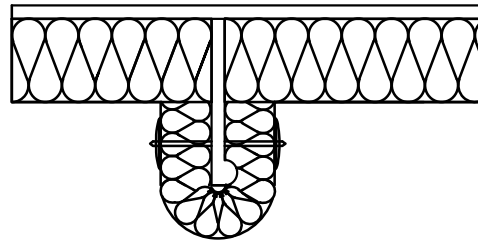
HP1b



HP3b



HP2



HP4

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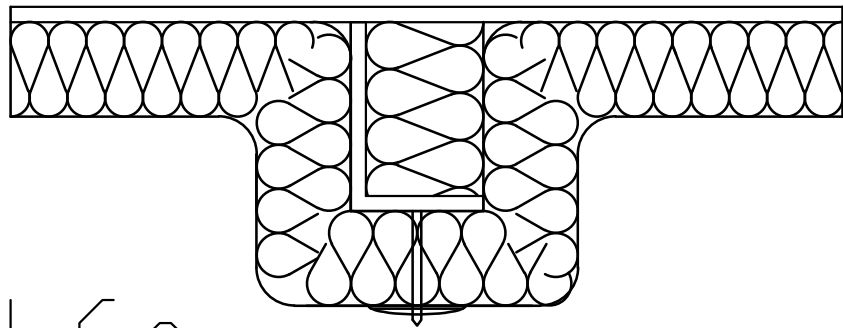
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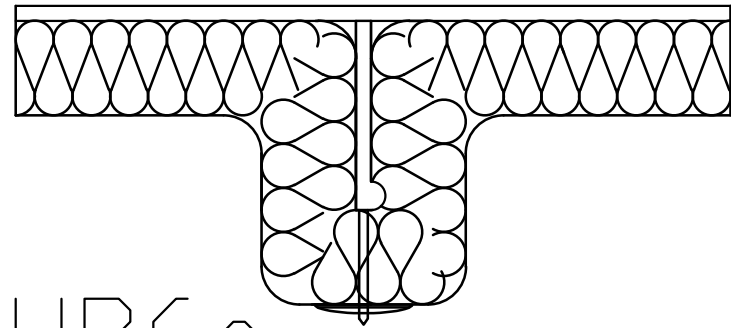
SAINT-GOBAIN ISOVER

Steel Deck Class A-15, A-30 and A-60
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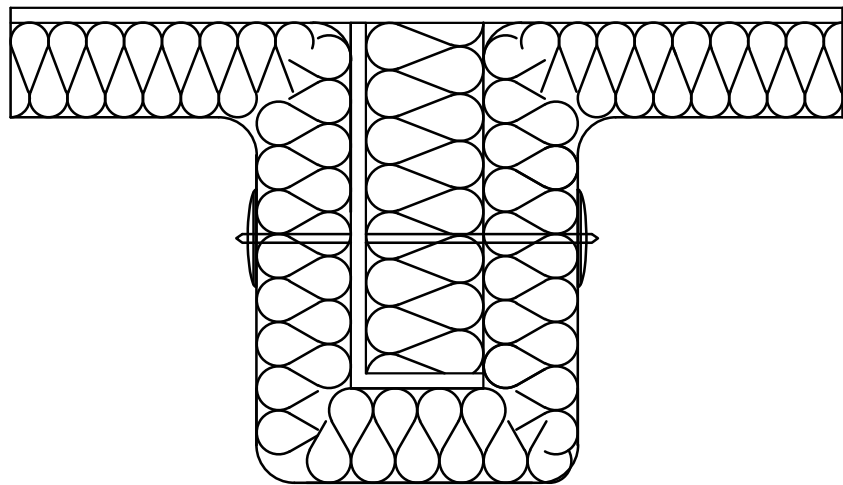
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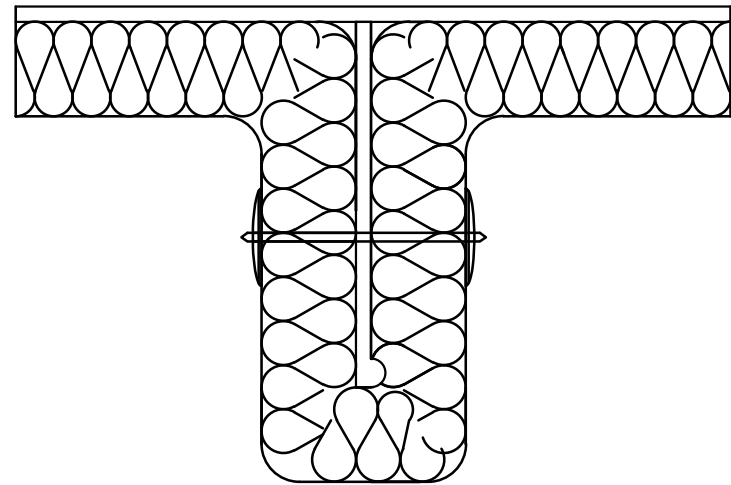
L6a



HP6a



L6b



HP6b

Only when the insulation on the flat surface and on the stiffeners is the same

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ISOVER

SAINT-GOBAIN ISOVER

Steel Deck Class A-15, A-30 and A-60
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